Delta RMP Steering Committee Meeting

November 20, 2012

9:00 AM – 12:00 PM
Sacramento Regional County Sanitation District Building
Sunset Maple Room
10060 Goethe Road, Sacramento, CA 95827

Draft Agenda

1.	**Approval of Agenda and Minutes (Attachment)** Review of agenda and action items.	**9:00** **Brock Bernstein**	meeting summary 10-12-12.docx
2.	**Action: Categories of SC members (Attachment/Handout)** Linda Dorn has requested to further discuss and clarify the categories represented by SC members **Desired Outcome:** agree on definitions for membership categories represented on preliminary SC	**9:05** **Brock Bernstein**	DRAFT SC categories.docx
3.	**Information: Steering Committee Representatives (Attachment/Handout:** same as Item 2**)** Represented parties confirm their Steering Committee representatives and alternates	**9:15** **SC Representatives**	
4.	**Action: SC Core Responsibilities and Authorities/ Structure and Roles of the Stakeholder and Technical Advisory Committees (Attachment/Handout)** ASC staff has drafted a list of the SC's core responsibilities and authorities and developed options for the structure and roles of the Stakeholder and Technical Advisory Committees. **Desired Outcome:** 1. Agree on the kinds of decisions the SC will be tasked with. 2. Agree on structure and roles of SC and TAC	**9:20** **Brock Bernstein**	DRAFT Delta RMP Committee Roles.doc

5.	**Action: Mission Statement (Attachment/ Handout)** ASC staff has drafted a mission statement based on language in earlier Delta RMP documents. **Desired outcome:** Review and accept mission statement	**9:45** **Brock Bernstein**	DRAFT mission statement.docx
6.	**Action: Management Questions (Attachment/ Handout)** Agreement is sought on the broader questions for the Delta RMP. ASC staff has developed working materials to support the discussion and will brief the SC on the history of the Delta RMP's management question development, examples of management questions from other programs, and the necessary hierarchy of question types. **Desired Outcome:** 1. Agree on a process and timeframe for developing the monitoring questions. 2. Agree on the broad management questions that will provide the basis for developing specific questions that lead to monitoring design. 3. Identify the process for arriving at a monitoring design	**10:10** **Brock Bernstein/ Thomas Jabusch**	DRAFT material mgtm questions.docx
7.	**Plus/Delta[1] on today's meeting**	**11:55** **Brock Bernstein**	
8.	**Confirm date for January SC meeting (Jan. 23).**	**11:59** **Brock Bernstein**	
9.	**Adjourn**	**12:00**	

[1] A *Plus/Delta* allows a team, group, or committee quickly to gather feedback from its participants on what it has been doing well and what it could do better. The name, intentionally more positive than Plus/Minus would be, uses delta, the Greek letter that symbolizes change in mathematics, to highlight the team's opportunities for improving how it does its work. The process can take as few as five minutes, i.e. going around the table asking, "What was good/went well in this meeting?" "What can we improve?"

Delta RMP Steering Committee Meeting

October 12, 2012

North Natomas Library

Draft Meeting Summary

Attendees:

Steering Committee members present[1]*:*

Anke Mueller-Solger, Interagency Ecological Program (IEP/DSC)

Brandon Nakagawa, Stormwater, Phase II Communities (County of San Joaquin)

Casey Wichert, POTWs (City of Brentwood)

Debbie Webster, POTWs (CVCWA)

Delia McGrath, Stormwater, Phase I Communities (City of Sacramento)

Erich Delmas, POTWs (City of Tracy)

Karen Schwinn, U.S. EPA (U.S. EPA Region 9)

Kenneth Landau, Central Valley Regional Water Board

Linda Dorn, POTWs (SRCSD)

Mike Wackman, Agriculture (Delta & San Joaquin County Water Quality Coalition)

Val Connor, State and Federal Water Contractors (SFWCA)

Others present:

Afiqur Khan, WPHA

Brian Laurenson, LWA

Brock Bernstein, Facilitator

Bruce Houdesheldt, SVWQC

Dee Dee Antipas, City of Stockton

Erin Foresman, U.S EPA

[1] *Name, Representation (Affiliation)*

Jason Lofton, SRCSD

Karen Ashby, LWA

Meghan Sullivan, Central Valley Regional Water Board

Mike Mosley, USBR

Rainer Hoenicke, ASC

Stephanie Fong, Central Valley Regional Water Board

Stephen Clark, Pacific EcoRisk

Steve Blecker, DSP

Thomas Jabusch, ASC

Valentina Cabrera, U.S. EPA

Vyomini Pandya, SRCSD

1. Agenda Review and Meeting Format

Based on the outcomes of previous discussions of the meeting materials by POTW stakeholders, Linda Dorn proposed changes to the agenda. For example, POTW members recommended that a chair and vice chair should not be selected until the SC knows what its decision-making processes should be, who can and should be a member, whether the committee should be permanent or not, what its general responsibilities and specific charter might be, etc. There was general agreement that the meeting should be used to agree on a decision-making process and clarifying the SC membership and criteria for adding and removing members. Accordingly, the remainder of the meeting was used to discuss and decide on foundation issues, the decision-making process, procedures for adding and removing Steering Committee seats and replacing members, terms, and the meeting schedule.

2. Key Decisions

Notes

The group reviewed a draft document prepared by Delta RMP staff laying out options for key decisions the SC would need to consider. Several meeting participants raised questions about the purpose and format of the meeting and SC membership, resulting in a review and discussion of the outcomes of the August 15 stakeholder meeting and those of prior meetings. In response to specific questions, Brock Bernstein and Ken Landau reviewed agreements reached at prior stakeholder meetings (see Appendix A for detail). Ken also noted that nothing had been decided other than that the Regional Water Quality Control Board wants to see an RMP. One of the main reasons for requesting an RMP is that the Regional Water Board came to the conclusion that some questions are more effectively addressed by more coordinated monitoring (vs. going to individual dischargers and requesting special studies). However, there are studies that would need to be done to tackle some of the bigger issues that will need more funding than available. The question is going to be how to fund them. Mike Wackman suggested that the group should initially be looking at identifying efficiencies of scale. Anke Mueller-Solger suggested that the future Delta Science Plan might provide a framework for integrating the RMP with other efforts. Brandon Nakagawa noted that the policymakers he represents required three things to justify his attendance: “1) don’t coordinate your own funeral, 2) program participation needs to remain cost-neutral, and 3) participate only if it makes sense.” Ken Landau explained that the RMP would be a significant change to how the Regional Board does day-to-day business, which will not be easy to do for the agency. It signifies willingness to do something else than always “ratcheting it up.” He acknowledged that there are trust issues that have to be worked through. Debbie Webster and Linda Dorn proposed to consider the group present as the design group that will be charged with questions such as: how would the deciding group work? How would it function? With some agreement on these fundamental decisions about the governing body, the question can be asked whether there is enough structure to formalize it.

Attendees agreed to postpone discussion of potential new Steering Committee members until the Committee is better organized and has completed its discussion of management questions / strategic direction.

Linda Dorn noted that the POTW stakeholders had prioritized resolving the question of how formal the decision-making process should be and suggested it as a starting point. The remainder of the discussion addressed several key decision points (#1-3) that were considered a priority:

#1. Decide decision making process

Notes

The discussion addressed the formality of decision-making (informal vs. vote) and the mechanism for formal notices. Karen Ashby recommended to agendize decisions, discussion points, etc. Rainer Hoenicke pointed out that ASC already has a template for the San Francisco Bay RMP that can be used. Ken Landau advised that the Sturgis Standard Code would be preferable to the Roberts Rules of Order as a formal decision-making process. Mike Wackman noted that decisions should be agendized. He also pointed out that it is easier to take off an agenda item than to put it on. Attendees agreed that while the Delta RMP's main focus will be on producing high quality scientific information to help answer key management questions, the Steering Committee may at its discretion make policy recommendations based on the science; however, the regulatory agencies may recuse themselves from such recommendations to avoid any conflict of interest.

Decisions

2#1.1. Decisions will be made by general agreement, unless one or more Steering Committee members object, at which point the Chair will call for a vote

2#1.2. Meeting notices and other materials of broad, general interest will be distributed via the Lyris email list and posted on the project website (currently hosted by the Regional Board), with materials specifically intended for the Steering Committee

distributed via a separate email list to Steering Committee members and their alternates

2#1.3. Decisions can be made only for those items noticed on the meeting agenda, however…

2#1.4. Items not on the meeting agenda may be discussed at the discretion of the Chair and members should make every effort possible to provide advance notice of their intent to bring up a new item; however, any such discussion will require unanimous consent of the Steering Committee members present, i.e., any member can veto the discussion

2#1.5. No proxy voting will be allowed

2#1.6. Parties with multiple seats (specifically POTWs and stormwater at this point) may identify a small pool of alternates for their Steering Committee representatives, instead of designating a specific alternate for each representative. Alternatives should be well informed about the Delta RMP and the Steering Committee's issues and be prepared to participate effectively in meetings they attend

2#1.7. If voting is required, a simple majority of Steering Members present will be required for a decision

#2. Establish term for committee members

Notes

Ken Landau made a recommendation to establish a term of at least one year. Linda Dorn indicated her preference would be a term of two years. Mike Wackman suggested leaving it up to the discretion of the various entities to establish terms for their individual representatives. Debbie Webster suggested reconfirming SC members with the SC every 2 years. Anke Mueller-Solger suggested unlimited terms, leaving it up to the entities to decide on their representation, and to reconfirm members every 2 years.

Decision

2#2.1. Steering Committee members shall serve at the discretion of the parties they represent (i.e., they may be removed at any time) and shall be explicitly reconfirmed every two years

#3. Quorum

Notes

Debbie Webster made a proposal that there would need to be a quorum at a meeting to make decisions and to establish a quorum before decision-making as soon as people show up. Brock Bernstein suggested the following sequence: a) no meeting without notice, 2) no decision without it being on the agenda, 3) there needs to be a quorum to make decision, and 4) participants can continue to make decisions even if there is no more quorum. Debbie Webster suggested that a quorum should be 50% or over. Mike Wackman agreed with 50%, amended with a reference to ensure adequate representation of different entities. Brock Bernstein suggested 50% or more of the seats and 50% or more of the categories.

Decision

2#3.1. The current Steering Committee membership is preliminary and this group will meet to continue defining governance issues and the program's basic strategic direction and management questions; subsequent to that, parties may decide to change their representatives on the Steering Committee

2#3.2. Decisions can be made only if a quorum is present, defined as 50% or more of the Steering Committee members and 50% or more of the categories

2#3.3. For the moment, categories are defined as POTWs, stormwater, regulatory agencies, agriculture, IEP, state and federal water contractors

2#3.4. A quorum may be established at any time during the meeting and, once established, will continue to exist for purposes of decision making even if the number of Steering Committee members present drops below the level defining a quorum (e.g., if one or members leave the meeting)

2#3.5. All Steering Committee meetings must be noticed, which will consist of email distribution of the meeting date, time, and agenda at least one week prior to the meeting

2#3.6. The Delta RMP's governance structure and process will not be defined by MOU but rather by a less formal set of agreements, such as those made at this meeting

2#3.7. Some decisions that are time sensitive or less significant can be made via email or phone conference, but only if these items have previously been discussed in a Steering Committee meeting

Additional decision points

Notes

SC responsibilities will include deciding on a combination of issues regarding implementation and how to do the funding. There are different types of funding, including roughly 1) process support (e.g. ASC contract), 2) shifting and freeing up of resources, and 3) in-kind support (monitoring, data analysis, and assessment) and additional contributions (e.g. SFWCA support). Brock Bernstein explained that the SWAMP estimating framework was used to cost out contributions in the Los Angeles and San Gabriel Rivers Watershed RMPs. Linda Dorn pointed to a statewide effort underway to estimate cost of compliance. Brock Bernstein responded that the Delta RMP staff would continue figuring out cost estimates and at the same time the Regional Board needs to review requirements. The intent is to start the RMP at a cost-neutral place.

Brock Bernstein then asked participants to think about what else there is "to spell out". What kinds of decisions will the SC be tasked with? These will likely include the following: overall strategic direction including questions, make funding (major funding decisions), set basic terms of partnerships with other programs, deciding on general policies and procedures, reviewing and signing off on major product, and reviewing and deciding on major contracts. Delia McGrath added that the questions to tackle would need to include "What to do with the results?" and "What to do in the future?"

Attendees agreed that parties would identify alternates for their Steering Committee representative(s) by the time of the next meeting. Anke-Mueller Solger informed the group that Stephanie Spaar would be the IEP alternate.

Decisions

2#_.1. The Delta RMP's governance structure and process will not be defined by MOU but rather by a less formal set of agreements, such as those made at this meeting

3. Future meeting schedule and next steps

Notes

The group agreed that the mission statement and questions would be discussed next time. Linda Dorn recommended that there would be no meetings on Fridays (because of City furloughs affecting some SC members) and establishing technical committees by spring. The group agreed to meeting monthly for 4 or more months (but no meeting in December). Delia McGrath recommended deciding on the meeting frequency. Attendees agreed that the Steering Committee will meet approximately monthly for the next several months: November 20,

January 23, February 27, March 27, with each meeting running from 9:00 AM to Noon. Linda Dorn and Debbie Webster suggested enabling remote participation.

Val Connor requested that in notes be included action items, decisions, and parking lot items.

Anke-Mueller Solger informed the group about upcoming meeting dates in spring: California Water and Environmental Modeling Forum (CWEMF, April 22-24) and the IEP workshop (April 24-26; http://www.water.ca.gov/iep/) at the Lake Natoma Inn in Folsom.

Decisions

3.1. Meeting frequency will be once per month during the initial program development phase and quarterly after that

3.2. Remote participation in Steering Committee meetings will be allowed, where facilities are available, with the understanding that remote participation is less effective

4. Action Items

4.1. Represented parties identify alternates for their Steering Committee representative(s) (November 20, 2012).

4.2. ASC staff will draft a list of the Steering Committee's core responsibilities and authorities, which include: Define the Delta RMP's goals and strategic direction, establish and/or review and authorize policies and procedures, review and authorize budgets, make decisions about funding and expenditures (including how funding is received and disbursed), establish and define goals for partnerships with other entities, create and manage partnerships with other programs, review and sign off on major products, manage the activities of the Stakeholder and Technical Advisory Committees and the implementing entity,

review and authorize monitoring plans and technical policies (e.g., QA/QC, data management) (due: Nov 13, 2012)

4.3. ASC staff will draft a short Delta RMP mission statement based on language in earlier Delta RMP documents (due: Nov 13, 2012)

4.4. Prepare agenda using the San Francisco Bay RMP template and send out by Nov 13.

4.5. Agendize discussion of categories of Steering Committee members for next meeting (due: Nov 13, 2012)

4.6. ASC staff will prepare working materials to support discussion of management questions at next meeting (due: Nov 13, 2012)

4.7. ASC staff will contact dischargers they have previously interviewed to ask permission to share interview notes with Regional Board staff in order to support the Regional Board's permit-by-permit review of receiving monitoring requirements (due: Nov 13, 2012)

4.8. ASC staff will develop options for the structure and roles of the Stakeholder and Technical Advisory Committees by the next meeting (due: Nov 13, 2012)

4.9. Regional Board staff, ASC staff, and the permittees will continue to work on estimating the costs of current receiving water monitoring (due: Jan 2013)

4.10. Regional Board staff will conduct a permit-by-permit review of receiving water monitoring requirements to determine which ones may have outlived their usefulness and/or may produce information that is relatively less important than new information at broader spatial scales (due: Jan 2013)

4.11. The Steering Committee will track development of the Delta Science Plan and identify opportunities for the Delta RMP to participate in, interact with, and/or coordinate with the Plan's development process (continuous)

5. Parking Lot

5.1. Use of stakeholder group

5.2. Technical Advisory Committee (mission or charter, goals, structure, role, identify boundary)

5.3. Select Chair and Vice Chair

Attachment A.

Agreements From Prior Delta RMP Stakeholder Meetings

A.1. Regional Water Board is putting "everything on the table" in terms of monitoring requirements in order to improve efficiency, coordination, and the ability to address important questions at larger spatial scales about water quality and whether management actions are having their intended effects

A.2. Regional Water Board will use the Delta RMP design process and monitoring results to reconsider permit conditions, listings, and other regulatory elements

A.3. Efficiency, coordination, and buy-in will be increased if the Delta RMP addresses questions and data needs that many parties have in common

A.4. The geographical scope of the Delta RMP may extend somewhat beyond the legal definition of the Delta, depending on parties' interests and opportunities to achieve the Delta RMP's goals

A.5. There is a common interest among the regulatory agencies and IEP in improving coordination and efficiency and they are willing to be as flexible as possible (given their own regulatory and management constraints) to help achieve these goals

A.6. The Delta RMP should keep in mind the opportunity it has to influence monitoring and assessment requirements as other monitoring programs (e.g., IEP) review and revise their programs to address new flow objectives and other management / regulatory initiatives, such as the BDCP, are further developed

A.7. The Delta Plan can serve as a framework for integrating Delta RMP with these other monitoring efforts

A.8. The Regional Board's intent is that the Delta RMP be cost neutral relative to existing monitoring efforts, while recognizing that new State Water Board requirements may raise the baseline level of monitoring required

Attachment B.

Expectations and Anxieties

Expectations

(SC responses to the question: "What does this need to be for you to consider this a success?")

B.1. Val Connor (State and Federal Water Contractors): better understanding of water quality in the Delta

B.2. Linda Dorn (POTWs): to help other agencies and organizations with big decisions about what the Delta is supposed to be

B.3. Anke Mueller-Solger (IEP): RMP needs to address very clear and important data gaps to be filled that are also important and useful to others

B.4. Ken Landau (Central Valley Water Board): looking for good solid scientific information to inform Regional Board decisions

B.5. Delia McGrath (Stormwater, Phase I Communities): opportunity to increase the level of concern for constituents that require a broader approach

B.6. Brandon Nakagawa (Stormwater, Phase II Communities): better communication and more collaboration between regulators and the regulated community

B.7. Karen Schwinn (U.S. EPA): would like to see baseline conditions characterized, scientifically credible, look into the future

B.8. Mike Wackman (Agriculture): efficiencies (dollars & cents), well designed and interpreted studies

B.9. Erich Delmas (POTWs): characterize trends in Delta, better understanding of specific subregional characteristics around Tracy area; improve understanding of background and baseline conditions

B.10. Casey Wichert (POTWs): potentially a very good vehicle to improve understanding of Deltawide water quality conditions; success would be a better, holistic understanding of conditions and improved coordination and collaboration between agencies

Anxieties

(SC responses to the question: "What would make you leave the Delta RMP?")

B.11. Val Connor (State and Federal Water Contractors): if the program selected questions that added no value to existing studies

B.12. Linda Dorn (POTWs): if this had the appearance of being just another burden on participants without any measurable benefits to the environment

B.13. Anke Mueller-Solger (IEP): if there was little effort to fit the Delta RMP in with other efforts in and around the Delta

B.14. Ken Landau (Central Valley Water Board): if it turns into simply a finger-pointing exercise

B.15. Delia McGrath (Stormwater, Phase I Communities): if there is no direct tie to our concerns

B.16. Brandon Nakagawa (Stormwater, Phase II Communities): if the process is derailed

B.17. Mike Wackman (Agriculture): if it turns into a finger-pointing exercise or the studies are intended to confirm a predetermined outcome

B.18. Erich Delmas (POTWs): if the studies and other efforts are futile and do not produce useful results

B.19. Casey Wichert (POTWs): if the program's goals are not relevant to cities and/or are excessively costly

Steering Committee Categories

Membership

The membership of the SC represents a variety of water quality related interests with a substantial monetary or in-kind investment in the Delta RMP. The current Steering Committee membership is preliminary. Each represented party designates a representative and alternates who would participate on those occasions when the representative is unable to participate in person.

- **Regulatory - State**
  - Kenneth Landau
    Central Valley Regional Water Quality Control Board, Assistant Executive Officer
  - Alternates:
    - Pamela Creedon, Assistant Executive Officer
      Central Valley Regional Water Quality Control Board
    - Stephanie Fong, Senior Environmental Scientist
      Central Valley Regional Water Quality Control Board

- **Regulatory - Federal**
  - Karen Schwinn
    U.S.EPA Region 9 Water Division, Associate Director
  - Alternates:
    - Valentina Cabrera-Stagno, Environmental Scientist
      U.S.EPA Region 9 Water Division, Watershed Division
    - Erin Foresman, Environmental Scientist & Policy Coordinator
      U.S.EPA Region 9

- **Interagency Ecological Program (IEP)**
  - Gregg Erickson, Chair, IEP Coordinators
    Interagency Ecological Program
  - Alternates:
    - Stephani Spaar, Chief, Office of Water Quality
      Division of Environmental Services
      California Department of Water Resources
    - Anke Mueller-Solger, IEP Lead Scientist
      Delta Stewardship Council

- **Regulated Community - Publicly Owned Treatment Works**
  - Linda Dorn, Environmental Program Manager
    Sacramento Regional County Sanitation District
  - Tony Pirondini, Water Quality Manager
    City of Vacaville
  - Jeff Willett, Assistant Director of Municipal Utilities
    City of Stockton
  - Alternates:
    - Debbie Webster, Executive Director
      Central Valley Clean Water Association
    - Erich Delmas, Laboratory Supervisor
      City of Tracy
    - Casey Wichert, Wastewater Manager
      City of Brentwood
    - Nader Shareghi, Public Works Director
      Mountain House Community Services District
    - Jenny Skrel, District Engineer
      Ironhouse Sanitary District

        - Jason Lofton, Associate Engineer

          Sacramento Regional County Sanitation District
        - Vyomini Pandya, Assistant Engineer

          Sacramento Regional County Sanitation District

- **Regulated Community - Storm Water, Phase I**
    - Delia McGrath, Senior Engineer

      City of Sacramento
    - Alternate: Dave Tamayo, Environmental Specialist

      County of Sacramento

- **Regulated Community - Storm Water, Phase II**
    - Brandon Nakagawa, Interim Water Resources Division Manager

      San Joaquin County Department of Public Works
    - Alternate: TBD

- **Regulated Community - Agriculture**
    - Mike Wackman, Legislative Director

      San Joaquin County and Delta Water Quality Coalition
        - Alternate: Bruce Houdesheldt, Program Manager

          Sacramento Valley Water Quality Coalition

- **Regulated Community - Water Supply**
    - Val Connor, Science Program Manager

      State and Federal Contractors Water Agency
    - Alternate: Lynda Smith, Senior Resource Specialist

      Metropolitan Water District

Steering Committee

The core responsibilities and authorities of the Steering Committee (SC) are to determine the overall budget, allocate program funds, track progress, and provide direction to the Program from a manager's perspective. The SC will meet quarterly.

The Delta RMP Steering Committee is the key decision-making authority of the Delta RMP. The Steering Committee is responsible for establishing the RMP's strategic direction and the policies and procedures that govern its operation. The Steering Committee may direct RMP staff and/or advisory committees to assist in meeting the RMP's objectives and may delegate the day-to-day functions of the RMP to the RMP's implementing entity.

The Steering Committee shall have the authority to implement any agreements among the participating members and, specifically, to:

1. Request and receive federal, state, local, and private funds from any source and to expend those moneys to accomplish the Delta RMP's goals
2. Approve budgets and expenditures
3. Enter into partnerships, contracts, and other legal agreements on behalf of the Delta RMP, as necessary to fulfill the Delta RMP's mission
4. Approve Delta RMP work products and any other plans, products, or resolutions of the Delta RMP
5. Set priorities and oversee the activities of the Stakeholder and Technical Advisory Committees
6. Establish and oversee the implementation of policies and procedures necessary to the day-to-day functioning of the Delta RMP

Membership on the Steering Committee will not diminish the regulatory responsibilities or authority of any participating agency or organization.

Technical Advisory Committee

The Technical Advisory Committee (TAC) provides oversight of the technical content and quality of the RMP. It consists of technical representatives from the RMP membership groups, with technical support from Delta RMP staff. The Technical Review Committee will meet quarterly.

The responsibilities of the TAC are to assist the Steering Committee in developing, reviewing, and revising the Delta RMP's core management questions; monitoring and special studies priorities in line with the management questions; report to the Steering Committee on technical issues as requested by Steering Committee members and develop white papers where appropriate; to select and convene *ad hoc* subcommittees or workgroups, with members drawn from both within and outside the TAC to include appropriate scientific or technical advice from individuals with specialized expertise not fully represented on the TAC and to provide guidance on specific issues; provide review and recommendations to the Steering Committee on select project proposals that are technical in nature or have a strong technical component; and provide review and recommendations to the Steering Committee on select policies that are technical in nature or have a strong technical component and are being proposed for adoption by the Steering Committee; develop and/or contribute to the annual Pulse of the Delta report.

The TAC consists of experts in estuarine science and related fields who are able to provide scientific opinions on a broad range of subject areas. TAC members contribute the latest technical input on issues and have a working knowledge of the current scientific knowledge in their field. TAC members may be drawn from the organizations represented on the Steering Committee but are not limited to these. They may be drawn from a variety of sectors, e.g.

academia, NGOs, government agencies, but they function as individuals and disinterested scientific experts, not as representatives of their sectors. The TAC may convene appropriate science advisory panels and or/pay independent experts to provide science advise on specific projects, initiatives, reports, and studies. Finally, TAC members are able to work collaboratively to examine technical issues and develop advice and recommendations for the Steering Committee.

Membership on the TAC is for a two-year term. The number of terms served by an individual are not limited but must be renewed. Once the TAC is established, the TAC members will work with Delta RMP staff to nominate new (or existing) members, for approval by the Steering Committee. The members of the TAC will appoint a Chair for a two-year term. A qualified Chair has a broad understanding of scientific issues in the Delta and can provide strong leadership and direction to the group.

Other Stakeholders

All meetings of the Delta RMP are public. Stakeholders that are not RMP participants will have the opportunity to weigh in by participating in meetings and providing additional project and product review. Other stakeholders may also participate in specific technical workgroups.

DRAFT Delta RMP Mission Statement

The Delta Regional Monitoring Program's mission is to accelerate and improve decisions intended to sustain healthy aquatic ecosystems, by developing objective scientific information critical to a more comprehensive understanding of water quality conditions and trends in the Delta through monitoring, assessment, and reporting.

WORKING MATERIALS TO SUPPORT DISCUSSION OF MANAGEMENT QUESTIONS

1. History of the Delta RMP's management question development
    a. Program intent (Water Boards Bay-Delta Strategic Workplan, June 2008)
    b. Proposed Core Questions for the Delta RMP (Pulse of the Delta 2012)
    c. Proposed questions for pilot ambient monitoring plan (Delta Regional Monitoring Program draft document, June 2012)
    d. Alternative questions proposed in response to proposal
        i) Example questions (San Joaquin County and Delta Water Quality Coalition)
        ii) Alternative set of goals and objectives for an RMP (SRCSD, CVCWA, SSQP)
2. Examples of management questions from other programs
    a. Hierarchical framework
        i) SWAMP Assessment framework
        ii) Example 1: San Francisco Bay RMP
        iii) Example 2: San Gabriel River RMP
3. Delta RMP "niche" and context
    a. Range of assessment efforts
    b. Delta water quality monitoring programs
    c. Monitoring questions of Water Board programs
4. Proposed prioritization criteria for monitoring questions

1. History of the Delta RMP Management Question Development

a. Program intent (State Water Resources Control Board, Central Valley Regional Water Quality Control Board, and San Francisco Bay Regional Water Quality Control Board: DRAFT Strategic Workplan for Activities in the San Francisco Bay/Sacramento- San Joaquin Delta Estuary, June 2008, pages 56-57.

Comprehensive Monitoring Program

Goal: The long-term (3-5 years) goal is to develop a RMP for the Bay-Delta. Inherent …is the need to develop a framework for coordinating monitoring and assessment efforts in and around the Delta.

Impetus: The pelagic organism decline in the Delta and subsequent increased focus on contaminants as a potential cause highlight the need for regularly compiling, assessing, and reporting data that is currently being collected and the need to better coordinate monitoring efforts.

Background: Many agencies and groups monitor water quality, water flows, and ecological conditions in the Bay-Delta, but there is no comprehensive contaminants monitoring and assessment program. IEP, CALFED, and other organizations, including the Water Boards, conduct some of these analyses, but due to their specific mandates, information gaps may exist. Emerging concerns with contaminants related to the decline of pelagic organisms in the Delta, wastewater treatment plant discharges, agricultural discharges, pesticides, BGA toxicity, and unknown toxicity events all highlight the need for well-coordinated contaminants monitoring. A system is needed for coordinating among monitoring programs and integrating contaminants monitoring into existing monitoring efforts whereby all data is synthesized and assessed on a regular basis.

b. Proposed Core Questions for the Delta RMP (Pulse of the Delta 2012)

These questions were distributed previously for stakeholder review and comment and have been revised and refined based on the input:

1. Draft Monitoring Questions Straw-man Proposal (26 November 2008)
2. Draft Program Plan (March 2010)
3. 2012 Pulse of the Delta (October 2012)

PROPOSED CORE QUESTIONS FOR THE DELTA RMP

THE PROPOSED CORE QUESTIONS AND ASSOCIATED MONITORING QUESTIONS OF THE DELTA RMP.

STRAW CORE QUESTION 1:
Are contaminants in the Delta potentially at levels of concern?

Associated Monitoring Question 1-1.
What is the spatial and temporal distribution of contaminants?

Associated Monitoring Question 1-2.
What are appropriate water quality guidelines?

Associated Monitoring Question 1-3.
Are there particular regions of concern?

STRAW CORE QUESTION 2:
What are the sources, pathways, loadings, and processes leading to water quality impacts in the Delta?

Associated Monitoring Question 2-1.
Which sources, pathways, loadings, and processes contribute most to impacts?

Associated Monitoring Question 2-2.
What are the effects of management actions?

STRAW CORE QUESTION 3:
What are the projected water quality conditions and associated impacts in the Delta?

Associated Monitoring Question 3-1.
What is the water quality forecast under various management scenarios?

c. Proposed questions for pilot ambient monitoring plan (Delta Regional Monitoring Program draft document, June 2012)

Agreements was achieved at NPDES Stakeholder Meeting, November 16, 2011 on two initial efforts:

1) Fix compliance monitoring.
2) Develop an ambient monitoring plan to assess if Basin Plan Objectives are met.
3) Hg in the Delta, with initial governance structure to be suggested by workgroup (this effort was later deferred by Regional Board staff, due to ongoing MeHg TMDL process)

The action item was for Brock Bernstein and Thomas Jabusch to

- Work with Regional Board staff to develop a "back-of-envelope" ambient monitoring plan and define the monitoring questions.

The action item was completed by distributing the Delta Regional Monitoring Program draft document for review in June 2012:

Delta Regional Monitoring Program: A Proposal for a Regional Monitoring and Assessment Framework and its Implementation (Brock Bernstein and Thomas Jabusch, June 2010):

The draft RMP program document included a primary question focused on objectives related to all aquatic life beneficial uses that was followed by a number of more specific assessment questions:

- Are receiving waters meeting water quality objectives?
  - What is the quality of waters relative to beneficial uses?
  - What is the extent and magnitude of water quality impacts in the Delta?
  - How do the extent and magnitude of water quality impacts compare among different parts of the Delta?
  - What are the trends in the extent and magnitude of water quality impacts in the Delta?
  - What are the sources of water quality problems?
  - Are efforts to address these problems working?

While there are a large number of potential indicators relevant to aquatic life beneficial uses, the draft program document identified toxicity as a primary indicator for evaluating the impacts of contaminants on aquatic life at the scale of the Delta as a whole. This led to a proposed monitoring design with the following elements:

- Sampling scheme
  - A randomized, or probabilistic, sampling scheme that includes the entire Delta, with the Delta treated as a single spatial stratum and sampling conducted at 30-40 sites per year
  - A targeted, or fixed site, sampling scheme that focuses on key inflows, sources of potential toxicity, and areas of particular concern
- Monitoring of toxicity and aquatic and sediment chemistry using indicators validated by SWAMP and/or other long-term programs
- Chemistry analyses conducted only on samples shown to be toxic and a small, random subset of nontoxic samples
- Sampling in winter (storm event), spring, and fall for the water column, and in the fall for sediments, with each time period treated as a separate temporal stratum
- An annual assessment period for aquatic conditions and a five-year assessment period for sediment conditions
- Special studies to elucidate processes and identify stressors and/or sources

The draft RMP program document included an additional question related specifically to discharges:

- Are discharges meeting water quality objectives?
  - Do contaminant levels in discharges meet permit limits and other water quality objectives?
  - Are contaminant levels in discharges increasing or decreasing over time?
  - What is the frequency of exceedances of water quality objectives?
  - Is the frequency of exceedances of water quality objectives getting better or worse over time?

b. Alternative questions proposed in response to proposal

Stakeholders who commented on the June 15 Delta RMP program draft suggested a number of alternative management questions**.**

i) Example questions (San Joaquin County and Delta Water Quality Coalition)

- Is the concentration of MeHg declining in Delta waters?
- Do Delta waters meet the load capacity for chlorpyrifos and diazinon as set forth in the Basin Plan? If not, where within the Delta is out of compliance?
- Does the concentration of pyrethroid pesticides in the water column appear to be sufficiently elevated to potentially cause impacts to biotic resources?
- Are persistent bioaccumulative chemicals such as organochlorines and PBDEs found in fish tissue at levels considered unsafe for human consumption?
- Is selenium being accumulated in the tissues of clams at a rate that after transfer to fish could cause a risk of reproductive failure in sturgeon?
- Are the concentrations of pyrethroids (or organophosphates or other constituents) declining in Delta waters?

ii) Alternative set of goals and objectives for an RMP (SRCSD, CVCWA, SSQP)

Goals

- Answer basic questions and communicate with the public and legislature about the beneficial uses of the water bodies, such as:
  - Is our water safe to drink?
  - Are our aquatic ecosystems healthy?
  - Is it safe to eat fish and shellfish from our waters?
  - Is it safe to swim?
- Establish baseline conditions and identify trends in:
  - Water quality,
  - Sediment quality
  - Biological diversity and integrity
  - Flows
- Support the efficient use of limited monitoring resources.
- Understand pollutant fate and transport, linking
  - Water quality to beneficial uses
  - Pollution sources to impairment
  - Impacts of watershed projects on receiving water quality
  - Surface water and groundwater interactions
  - Effects of atmospheric deposition and groundwater flux to water quality.

Objectives

Proposed objectives to articulate more specific efforts with measurable outcomes that help the program achieve its goals:

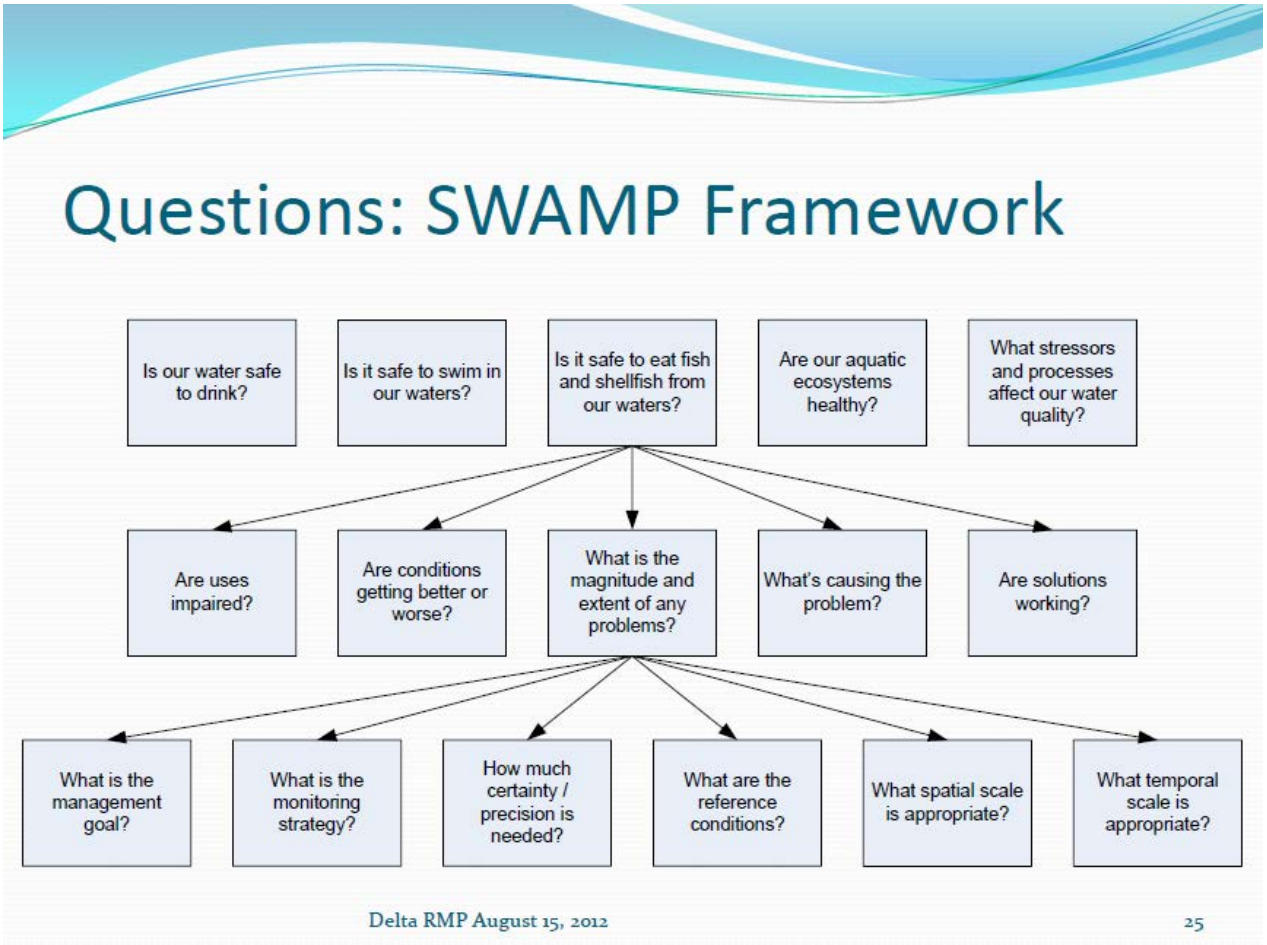
- Periodically monitor ambient water quality, sediments, biota, and habitats within the Delta in a comparable, high-quality, science-based approach that will provide data to make adaptive management decisions.
- Ensure that data are compiled and stored in comparable formats and readily available
- Determine the water quality effects of events in the watershed, including restoration projects, land development projects (especially urbanization), water quality improvement projects, and natural events (e.g., forest fires, extreme water years).
- Evaluate emerging contaminants.
- Develop, calibrate, and apply simulation models linking causes to effects to support management decisions.
- Aid in the development of TMDLs and track their attainment.
- Provide regular, transparent assessment reporting and program evaluation.
- Communicate and coordinate with stakeholders to prioritize and focus efforts.

2. Examples of management questions from other programs

a. Hierarchical Framework

i) SWAMP Framework

The diagram below from the SWAMP Assessment Framework defines a three-level hierarchy of questions that can be used to develop a monitoring design. The top level contains overarching management questions; the second level a more specific set of questions about patterns, trends, and sources; and the lowest level the technical detail needed to ensure statistical validity and cost effectiveness.



ii) San Francisco Bay RMP

RMP Goal and Management Questions

RMP stakeholders have articulated an overarching goal and a tiered framework of management questions that organize and guide RMP studies. The management questions are closely linked to existing and planned regulations.

Level 1 (Core) Management Questions

1. Are chemical concentrations in the Estuary potentially at levels of concern and are associated impacts likely?
2. What are the concentrations and masses of contaminants in the Estuary and its segments?
3. What are the sources, pathways, loadings, and processes leading to contaminant-related impacts in the Estuary?
4. Have the concentrations, masses, and associated impacts of contaminants in the Estuary increased or decreased?
5. What are the projected concentrations, masses, and associated impacts of contaminants in the Estuary?

Level 1 (Core) Questions	**Question 1** Levels of concern and associated impacts	**Question 2** Concentrations and masses (spatial distribution)	**Question 3** Sources, pathways, loadings, and processes	**Question 4** Increased or decreased (trends)	**Question 5** Projected concentrations, masses, and impacts
Level 2 Questions	**Q1** Which chemicals have potential for impacts?	**Q1** Are there particular regions of concern?	**Q1** Which sources, pathways, etc. contribute most to impacts?	**Q1** Effects of management actions on concentrations and mass?	**Q1** Impacts forecast under various management scenarios?
	Q2 What is the potential for impacts due to contamination?		**Q2** Opportunities for management intervention for important pathways?	**Q2** Effects of management actions on potential for adverse impacts?	**Q2** Which contaminants predicted to increase?
	Q3 What are appropriate guidelines?		**Q3** Effects of management actions on loads and processes?		
	Q4 What contaminants are responsible for impacts?				

General Goal of the RMP

Collect data and communicate information about water quality in the San Francisco Estuary in support of management decisions.

Consistent with, these general goals, the RMP addresses NPDES permit provisions for special studies and routine monitoring of the Bay

The following key criteria are used to evaluate potential RMP elements (in order of priority):

1) addresses relevant NPDES permit requirements
2) supports policies and adaptive implementation
3) addresses scientific information needs

iii) San Gabriel River RMP

This program identified five distinct questions, each with a subset of more detailed assessment questions.

- What is the condition of streams in the watershed?
  - What is the percentage of perennial streams that support their designated beneficial uses of Warm Freshwater Habitat, Cold Freshwater Habitat, and Wildlife Habitat?
  - Is the percent of streams in the watershed/region which support the beneficial uses of Warm Freshwater Habitat, Cold Freshwater Habitat, and Wildlife Habitat increasing or decreasing over time?
  - What is the distribution of benthic conditions (as reflected in IBI (Index of Biotic Integrity) scores) in streams of the watershed?
  - What proportion of streams have an altered/degraded benthic community structure (i.e., IBI scores substantially below reference or best attainable condition)?
- Are conditions at areas of unique interest getting better or worse?
  - Are areas of valued habitat supporting their designated beneficial uses of Warm Freshwater Habitat, Cold Freshwater Habitat, Wildlife Habitat, and/or Estuarine Habitat?
  - What is the condition of specific areas of valued habitat, and is this condition getting better or worse over time?
  - How do habitat and water quality conditions at valued habitat areas compare to conditions in other portions of the watershed?
  - What are the patterns and trends in general water mass characteristics (e.g. temperature and salinity) in the estuary?
  - What is the condition of sediment quality in the estuary?
  - What is the condition of water quality and habitat at key confluence locations (where major tributaries enter the mainstem) that are likely to reflect cumulative impacts from discrete portions of the watershed?
  - What are the differences in habitat or water quality between subwatersheds, as reflected by conditions at confluence sites?
  - What are the trends over time in the relative differences between subwatersheds?
- Are receiving waters near discharges meeting water quality objectives?
  - Do sites influenced by point sources support their designated beneficial uses of Warm Freshwater Habitat, Wildlife Habitat, and Estuarine Habitat?
  - At sites influenced by point discharges, what is the concentration of chemical contaminants and the status of biological indicators?
  - Is the concentration of chemical contaminants downstream of point source discharges above water quality objectives?
  - Is the value of biological indicators outside the range of control, reference, or background levels?
  - What is the frequency of exceedances of water quality objectives?
  - Is the frequency of exceedances of water quality objectives getting better or worse over time?
- Is it safe to swim?
  - Are bacterial indicator levels at body contact recreation areas above health standards, or adopted water quality objectives?
  - What is the relative risk of body contact recreation at locations in the watershed with high concentrations of recreational use?
  - What is the average level of bacterial indicators at sentinel sites in the watershed?
- Are locally caught fish safe to eat?
  - At frequently fished sites, estimate the concentration of or verify previous estimates of chemical contaminants in commonly consumed fish target species. Compare these levels to advisory levels and critical thresholds of potential human health risk
  - At frequently fished sites, track the trends in tissue concentrations of chemical contaminants in commonly consumed fish target species

3. Delta RMP "Niche" and Context

a. Range of Assessment Efforts

(from CMARP draft report June 26, 2008)

Agency/Organization	Program	Assessment Goals and Objectives
California Department of Fish and Game	Additional methylmercury assessments	Conducting additional methylmercury assessments in Yolo Bypass Wildlife Refuge wetlands
California Department of Fish and Game, Central Valley Bay-Delta Branch	Delta Smelt Study	Monitor the population in order to identify changes in its status.
California Department of Fish and Game, Central Valley Bay-Delta Branch	Fisheries Program	Responsible for monitoring population trends of fish populations in the Sacramento-San Joaquin Estuary with emphasis on striped bass, young chinook salmon, and the threatened delta smelt. Evaluates factors affecting those population trends.
California Department of Fish and Game, Central Valley Bay-Delta Branch	San Francisco Bay Study and Zooplankton/Neomysis Study	Conducts studies to determine the abundance and distribution of zooplankton, mysids, shrimp, crabs and fish in the Western Delta and San Francisco Bay Estuary. Conducts focused studies to quantify the factors controlling abundance and distribution of these organisms. Information from these studies is used to evaluate water project operations and develop recommendations to minimize project impacts.
California Department of Fish and Game	Selenium Verification Study	The Selenium Verification Study is a continuation of a statewide investigation of selenium in fish and wildlife, which began in 1985 and conducted under interagency agreement with the state Water Resources Control Board. Participates in a nationwide program conducted by EPA using newly developed protocols for stream assessment.
California Department of Fish and Game	Sturgeon and Striped Bass Population Studies	Conducts monitoring and research to determine long-term trends in abundance of juvenile and adult sturgeon and striped bass. Uses these data to evaluate factors affecting abundance and to make recommendations for changes in angling regulations and water management in the Sacramento-San Joaquin Estuary to increase sturgeon and striped bass populations.

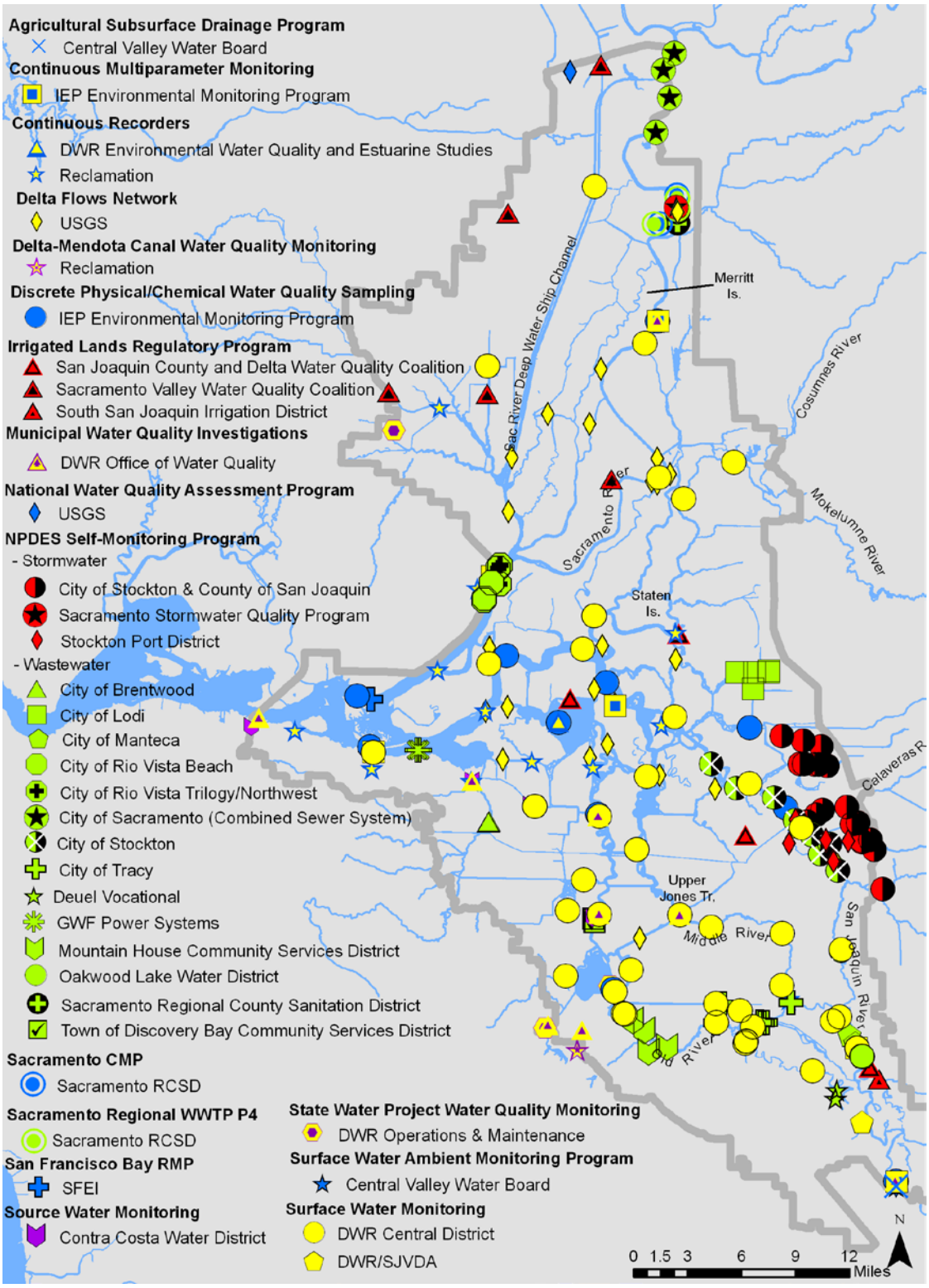
Agency/Organization	Program	Assessment Goals and Objectives
California Department of Forestry and Fire Protection	Fire and Resource Assessment Program	Assess the extent and condition of CA's forests and rangelands and develop management and policy guidelines.
California Department of Parks and Recreation, Inventory, Monitoring, and Assessment Program		Monitoring of Biological Resources: Level 1 - Preliminary (office oriented) · Determine lists of what habitats are potentially present; · Determine lists of what taxa are potentially present; Level 2 - Reconnaissance (field oriented) · Get a sense of resources present; · Spot obvious problems; · Determine the scale of work needed; Level 3 - Baseline (field oriented) · Determine presence; · Determine distribution; · Determine habitat type; · Develop base maps; · Determine if reproduction is occurring; Level 4 - Comprehensive (field oriented) · Determine presence; · Determine distribution; · Determine habitat type; · Develop base maps; · Determine if reproduction is occurring; Level 5 - Intensive (field & laboratory oriented) · Determine presence; · Determine distribution; · Determine habitat type; · Develop base maps; · Determine if reproduction is occurring
California Department of Pesticide Regulation, Environmental Monitoring Branch	Ground Water Protection Program	Determines where and how pesticides are contaminating ground water, identifies areas sensitive to pesticide contamination and develops mitigation measures to prevent that movement.
California Department of Water Resources	State Water Project Water Quality Monitoring	1 Compare SWP water quality to drinking water standards, Article 19 contractual requirements, or other criteria.

Agency/Organization	Program	Assessment Goals and Objectives
Central Valley Regional Water Quality Control Board	Irrigated Lands Program	1. To assess the effects of irrigated agriculture on water quality and associated beneficial uses for all waters of the state 2. To determine the effectiveness of management practices and strategies shown to reduce discharges of wastes that degrade water quality. 3. To determine the magnitude of waste discharged to waters of the State through concentration, flow and load information 4. To evaluate the presence of cumulative impacts from multiple stressors that may result in water or sediment toxicity 5. To evaluate compliance with water quality standards and to determined if implementation of additional management practices is necessary to improve and/or protect water quality
Central Valley Regional Water Quality Control Board	Surface Water Ambient Monitoring Program (SWAMP) - San Joaquin Unit	1) To evaluate whether the most limiting beneficial uses in a specific water body are being protected and help identify sources of potential impairment. 2) Determine, over time, if implementation efforts are improving water quality.
City of Stockton, Municipal Utilities Department	Stockton Stormwater Monitoring	Evaluate water quality of discharges as it relates to baseline or benchmark conditions in receiving waters.
National Oceanic and Atmospheric Administration, National Ocean Service	National Water Level Program	Meet NOAA's mission and goal requirements for water-level information.
Sacramento River Watershed Program	Amendment to transport, cycling and fate of mercury and methylmercury in the San Francisco Delta and tributaries	Conduct rate studies in Sacramento river during spring and fall to evaluate conservative transport of methyl mercury
Sacramento River Watershed Program	SRWP Monitoring Program	Develop a cost-efficient and well-coordinated long term monitoring program to assess conditions within the watershed to identify the causes, effects and extent of constituents of concern that affect the overall heath of the watershed and to measure progress as control strategies are implemented.

Agency/Organization	Program	Assessment Goals and Objectives
San Francisco Estuary Institute	Wetlands Regional Monitoring Program	WRMP provides the scientific understanding necessary to protect, create, restore, and enhance wetlands of the San Francisco Bay Region, through objective and cost-effective monitoring, research, and communication.
San Francisco Estuary Institute	Regional Monitoring Program for Water Quality	1. Describe the distribution and trends of pollutant concentrations in the Estuary 2. Project future contaminant status and trends using best understanding of ecosystem processes and human activities 3. Compare monitoring information to relevant benchmarks, such as TMDL targets, tissue screening levels, water quality objectives, and sediment quality objectives 4. Effectively communicate information from a range of sources to present a more complete picture of the sources, distribution, fate, and effects of pollutants and beneficial use attainment or impairment in the Estuary ecosystem
U. S. Fish and Wildlife Service, Stockton Fish and Wildlife Office	IEP Delta Juvenile Fish Monitoring Program	Define the impacts of water development on the estuarine salmon population. 1. Evaluate the significance of delta fry rearing to overall production of the four races of chinook salmon. 2. Determine the impacts of water development within the delta on the abundance, distribution and survival of juvenile salmon
U. S. Geological Survey	National Water Quality Assessment Program	1. What is the condition of the Nation's streams, rivers, and ground water? 2 How are these conditions changing over time? 3. How do natural features and human activities affect these conditions, and where are those effects most pronounced?

b. Delta Water Quality Monitoring Programs

(from Summary of Current Water Quality Monitoring Programs in the Delta, November 2009)



c. Monitoring questions of Water Board programs

Irrigated Lands Regulatory Program

(1) –What are the impacts of waste discharges from irrigated lands to surface water?

(2) Are management practices being implemented?

(3) How effective are management practices and strategies in reducing discharges of wastes that impact water quality?

(4) What are the concentration and load of waste in these discharges?

(5) –Are discharges in compliance with existing narrative and numeric water quality objectives?

NPDES Self-Monitoring Program

Are dischargers complying with permit requirements?

Surface Water Ambient Monitoring Program (SWAMP) - Central Valley

(1) What is the spatial variability of ambient water quality in the Central Valley?

(2) What is the seasonal variability of ambient water quality in the Central Valley?

(3) Is there evidence beneficial uses are not being protected?

4. Proposed prioritization criteria for monitoring questions

1. *Has the question already been answered, or is it being answered?* If the answer is "yes", then the question is rejected. In these cases, the RMP should work to communicate the existing answer and to improve communication among water quality managers and scientists.
2. *Can the question be translated into a specific monitoring or study design?* The question needs to have "practical value" for planning and designing monitoring studies or assessments.
3. *Is the question directly related to the priority management concerns of multiple stakeholder groups?* If the answer is "yes", and the question has passed the other criteria, then it is given a high priority.
4. *Can the question be answered using available resources?* If the answer is "no", then the question is rejected. As the RMP grows, it will endeavor to add funds and partnerships that will increase its technical capabilities.
5. *Can the question be answered in three years?* If the answer is "no", or "probably not", then the question is rejected at this time. The Delta RMP should initially focus on important questions that can be answered quickly. There are many priority questions that cannot be answered without many years of monitoring or intensive research.
6. *Does the question provide opportunities for demonstrating the viability of regional monitoring concepts, building important institutional infrastructure, or developing needed monitoring tools (e.g., standardized methods)?*